

CATALOGUE OF THE NAMES PUBLISHED BY HECTOR LÉVEILLÉ: XV

L. A. LAUENER

ABSTRACT. The species described by Léveillé belonging to the families Aristolochiaceae, Piperaceae, Chloranthaceae, Lauraceae, Hernandiaceae, Thymelaeaceae, Elaeagnaceae, Loranaceae, Santalaceae and Balanophoraceae are evaluated. Other species described in, but not belonging to these families are also included. There are two new combinations: *Stellera chamaejasme* L. ssp. *angustifolia* (Diels) Kit Tan and *Tolypanthus esquirolii* (Lévl.) Lauener.

INTRODUCTION

This paper follows the same basic format as those previously published and listed below*.

Collaborators in this part are Dr D. K. Ferguson†, Department of Botany, University of Antwerp, who worked with me on Lauraceae, Dr Kit Tan, Flora of Turkey Unit, Edinburgh University, who wrote the accounts for Aristolochiaceae and Thymelaeaceae, and my colleague Mr D. McKean who did likewise for Elaeagnaceae. Miss H. Paul assisted with Piperaceae.

ARISTOLOCHACEAE (KIT TAN)

Aristolochia blinii Lévl. = *Ceropegia mairei* (Lévl.) Huber (Asclepiadaceae).

1807. *Aristolochia feddei* Lévl. in Fedde, Rep. Sp. Nov. 12: 287 (1913) & Cat. Pl. Yunnan 13 (1915); Rehder in Journ. Arn. Arb. 10: 184 (1929). CHINA. Yunnan, rochers de Ti-Li, 2800m, arbuste grimpant, fl. brunes, vi 1912, E. E. Maire s.n. (holo. E).

Aristolochia mairei Lévl. = *Ceropegia mairei* (Lévl.) Huber (Asclepiadaceae).

1808. *Aristolochia setchuenensis* Franch. in Journ. de Bot. 12: 312 (1898).
A. thibetica Franch. in Journ. de Bot. 12: 313 (1898).
A. setchuenensis Franch. var. *holotricha* Diels in Engl., Bot. Jahrb. 29: 310 (1900).
A. bonatii Lévl. in Bull. Soc. Bot. Fr. 56: 608 (1909) & Cat. Pl. Yunnan 11 (1915); Rehder in Journ. Arn. Arb. 10: 184 (1929), pro syn. sub
A. moupinensis Franch.
A. bonatiana Lévl. ms. in herb.

* Part I, Notes RBG Edinb. 23: 573-596 (1961); II, 24: 73-78 (1962); III, 26: 333-346 (1966); IV, 27: 1-10 (1966); V, 27: 265-292 (1967); VI, 30: 239-294 (1970); VII, 31: 397-435 (1972); VIII, 32: 93-116 (1972); IX, 34: 327-402 (1976); X, 35: 247-264 (1977); XI, 35: 265-279 (1977); XII, 37: 125-151 (1978); XIII, 38: 453-485 (1980); XIV, 40: 157-203 (1982).

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A. kaempferi Willd. f. *thibetica* (Franch.) S. M. Hwang in Acta Phytotax. Sin. 19(2): 230 (1981).

CHINA. Yunnan, taillis des montagnes, vii 1906 (*Hb. Bonati* no. 446), *E. E. Maire* s.n. (holo. *A. bonatii*, E).

A. moupinensis Franch., to which *A. setchuenensis* is closely related, has more pubescent leaves.

Aristolochia viridiflora Lévl. = ***Ceropegia mairei*** (Lévl.) Huber (Asclepiadaceae).

Aristolochia viridiflora Lévl. var. *occlusa* Lévl. = ***Ceropegia mairei*** (Lévl.) Huber (Asclepiadaceae).

1809. *Asarum arrhizoma* Lévl. & Van. in Fedde, Rep. Sp. Nov. 5: 101 (1908); Lévl. in Bull. Soc. Bot. Fr. 56: 609 (1909) & Fl. Kouy-Tchéou 36 (1914).

CHINA. Kweichow, Pin-fa, talus des ruisseaux, lieux ombragés, fl. rougeâtre, bonne odeur, 22 iii 1903, *Cavalerie* 933 (holo. E).

1810. *Asarum cavaleriei* Lévl. & Van. in Fedde, Rep. Sp. Nov. 9: 78 (1910); Lévl., Fl. Kouy-Tchéou 36 (1914).

A. cavaleriei Lévl. & Van. var. *esquirolii* Lévl., Fl. Kouy-Tchéou 36 (1914), nom. nud.

CHINA. Kweichow, Lo-Fou, ii 1909 (miscited as ii 1899 in Fl. Kouy-Tchéou), *Cavalerie* 3671 (holo. *A. cavaleriei*, E); Ma-chan, 1200m, iii 1910, *Esquirol* 2044 (var. *esquirolii*, E).

REFERENCES FOR ARISTOLOCHIACEAE

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FRANCHET, A. (1898). Plantarum sinensium ecloga secunda, Aristolochiaceae. *Journ. de Bot.* 12: 301–315.

HEMSLEY, W. B. (1890). The genus *Asarum*. *Gard. Chron.* ser. 3, 7: 420–422.

— (1891). An enumeration of plants from China, etc. *Journ. Linn. Soc. (Bot.)* 26: 358–360.

LÉVÉILLE, H. (1909). Aristolochiacées d'Extrême-Orient. *Bull. Soc. Bot. Fr.* 56: 607–612.

PIPERACEAE

(with H. PAUL)

1811. *Gymnotheca chinensis* Decne. in Ann. Sci. Nat. sér. 3, 3: 100, t. 5 (1845); Hand.-Mazz., Symb. Sin. 7: 155 (1929); P'ei in Contr. Biol. Lab. Sci. Soc. China (Bot. Ser.) 9: 110 (1934).

Saururus cavaleriei Lévl. in Fedde, Rep. Sp. Nov. 10: 149 (1911) & Fl. Kouy-Tchéou 314 (1915).

CHINA. Kweichow, Pin-fa; Ma-jo; Mou You Se, fleurs blanches, v-vi, *Cavalerie* 1041 (holo. *S. cavaleriei*, E).

1812. *Peperomia cookiana* C.DC. in DC., Prodr. 16(1): 450 (1869); Yuncker in B.P. Bishop Mus. Bull. 112: 63 (1933); Lauener in Notes R.B.G. Edinb. 38: 496 (1980); St John in Phytologia 45: 289 (1980).

P. refractifolia Lévl. in Fedde, Rep. Sp. Nov. 10: 151 (1911); Rock in Fedde, Rep. Sp. Nov. 13: 355 (1944).

HAWAIIAN (SANDWICH) ISLANDS. Molokai, Pukoo, v 1911, *Faurie* 123 (holo. *P. refractifolia* G-DC, iso. BM).

Yuncker miscited the type specimen as *Faurie* 133.

1813. *Peperomia dindygulensis* Miq., Syst. Pip. 122 (1843); Lévl., Fl. Kouy-Tchéou 313 (1915).

P. esquirolii Lévl. in Fedde, Rep. Sp. Nov. 10: 149 (1911).

CHINA. Kweichow, sine loc., *Esquirol* 710 (holo. *P. esquirolii*, E).

1814. *Peperomia fauriei* Lévl. in Fedde, Rep. Sp. Nov. 10: 151 (1911); Rock in Fedde, Rep. Sp. Nov. 13: 355 (1914); C.DC. in Candollea 1: 305 (1923); Yuncker in B.P. Bishop Mus. Bull. 112: 79 (1933); Lauener in Notes R.B.G. Edinb. 38: 496 (1980); St John in Phytologia 45: 289 (1980).

HAWAIIAN (SANDWICH) ISLANDS. Molokai, Pukoo, secus torrentes in petrosis rivulorum, v 1910, *Faurie* 108 (holo. G-DC, iso. BM).

1815. *Peperomia mapulehuana* Yuncker in B.P. Bishop Mus. Bull. 112: 79 (1933); Lauener in Notes R.B.G. Edinb. 38: 496 (1980).

P. helleri Lévl. in Fedde, Rep. Sp. Nov. 10: 151 (1911); Rock in Fedde, Rep. Sp. Nov. 13: 355 (1914) — non DC. (1898); St John in Phytologia 45: 289 (1980).

HAWAIIAN (SANDWICH) ISLANDS. Molokai, Pukoo, 800m, v 1910, *Faurie* 109 (holo. *P. helleri* Lévl. & *P. mapulehuana* G-DC, iso. BISH, BM).

REFERENCES FOR PIPERACEAE

DE CANDOLLE, C. (1923). Piperacearum clavis analytica. *Candollea* 1: 65-415.

P'EI, C. (1934). Notes on the genus *Gymotheca* of the family Saururaceae. *Contr. Biol. Lab. Sci. Soc. China* (Bot. Ser.) 9: 109-111.

YUNCKER, T. G. (1933). Revision of the Hawaiian species of *Peperomia*. *B.P. Bishop Mus. Bull.* 112: 1-131.

CHLORANTHACEAE

1816. *Sarcandra glabra* (Thunb.) Nakai, Fl. Sylv. Kor. 18: 17 (1930).

Bladhia glabra Thunb. in Trans. Linn. Soc. 331 (1794).

Chloranthus brachystachys Bl., Fl. Jav. 1(3): 13, t. 2 (1829); Rehder in Journ. Arn. Arb. 10: 111 (1929).

C. glaber (Thunb.) Makino in Bot. Mag. Tokyo 26: 386 (1912); P'ei in Sinensia 6: 671 (1935) & in Contr. Biol. Lab. Sci. Soc. China (Bot. Ser.) 10: 208 (1938); Lauener in Notes R.B.G. Edinb. 35: 270 (1977).

C. esquirolii Lév., Fl. Kouy-Tchéou 74 (1914).

Ardisia mairei Lév., Cat. Pl. Yunnan 177 (1916), nom. nud.

CHINA. Kweichow, Pe long, en face de Ma tchao tchay, 800m, vi-vii 1912, *Esquirol* 3646 (holo. *C. esquirolii*, E).

REFERENCES FOR CHLORANTHACEAE

P'EI, C. (1935). Chloranthus of China. *Sinensia* 6: 665-688.

— & SAN, R. (1938). A study of Chinese Chloranthus. *Contr. Biol. Lab. Sci. Soc. China* (Bot. Ser.) 10: 207-210.

LAURACEAE

(with D. K. FERGUSON)

1817. *Alseodaphne cavaleriei* (Lév.) Kosterm. in Candollea 28: 104 (1973), excl. syn. *Persea cavaleriei* (Lév.) Kosterm. & *Nothophoebe cavaleriei* (Lév.) Yang.

Machilus cavaleriei Lév. in Bull. Acad. Géog. Bot. 24: 142 (1914) & Fl.

Kouy-Tchéou 221 (1914); Rehder in Journ. Arn. Arb. 10: 192 (1929);

Liou, Laurac. Chine & Indoch. 60 (1932); Allen in Journ. Arn. Arb.

17: 326 (1936).

CHINA. Kweichow, Gan-chouen, bois, petit arbre, fl. vertes, v 1912, *Cavalerie* 2131 (holo. E).

1818. *Cinnamomum bodinieri* Lév. in Fedde, Rep. Sp. Nov. 10: 369 (1912), Fl. Kouy-Tchéou 218 (1914), Rev. Chine Ann. 21 (1916) & Cat. Pl. Seu-Tchouen, 96, t. 45 (1918); Allen in Journ. Arn. Arb. 17: 324 (1936); Li, H. S., in Acta Phytotax. Sin. 13(4): 37 (1975).

C. hupehanum Gamble in Sarg., Pl. Wils. 2: 69 (1914); Liou, Laurac.

Chine & Indoch. 26 (1932).

CHINA. Kweichow, environs de Kouy-yang, bois de la pagode de Lan-yo-chan, arbre énorme en hauteur et grosseur, 15 vi 1899, *Bodinier* 2622 (holo. *C. bodinieri*, E).

1819. *Cinnamomum camphora* (L.) Presl, Priroz. Rostlin 2: 36, 47-56, f. 8 (1825); Allen in Journ. Arn. Arb. 17: 324 (1936).

Laurus camphora L., Sp. Pl. 369 (1753).

C. taquetii Lév. in Fedde, Rep. Sp. Nov. 10: 370 (1912).

KOREA. Quelpaert in sylvis Tolsouni, x 1908, *Taquet* 1344 (syntype *C. taquetii*, E); in sylvis Taitpjeng, vii 1909, *Taquet* 3159 (syntype *C. taquetii*, E).

1820. *Cinnamomum caudifer* Kosterm. in Reinwardtia 8: 35 (1970) — non *C. camphoratus* Bl. (1826) nec *C. caudatum* Nees (1831).

Machilus camphoratus Lév. in Fedde, Rep. Sp. Nov. 9: 460 (1911), Fl.

Kouy-Tchéou 221 (1914) & Cat. Pl. Yunnan 151 (1916).

Alseodaphne caudata H. Lec. in Nouv. Arch. Mus. Hist. Nat. Paris, sér. 5, 5: 97 (1913) & in Not. Syst. 3: 11 (1914); Liou, Laurac. Chine & Indoch. 43 (1932).

A. camphorata (Lévl.) Allen in Journ. Arn. Arb. 17: 326 (1936).

CHINA. Kweichow, Pin-fa, petit arbre, odeur de camphore, v 1903, iv 1908, *Cavalerie* 1002 (holo. *M. camphoratus*, E).

Cinnamomum esquirolii Lévl. = *Cocculus laurifolius* DC. (Menispermaceae).

1821. *Cinnamomum mairei* Lévl. in Fedde, Rep. Sp. Nov. 13: 174 (Feb. 1914) & Cat. Pl. Yunnan 150 (1916); Rehder in Journ. Arn. Arb. 10: 192 (1929).

C. argenteum Gamble in Sarg., Pl. Wils. 2: 67 (March 1914).

CHINA. Yunnan, Long-ky, forêts, 700m, arbre moyen, feuilles caduques, fl. grises, vi 1912, *E. E. Maire* s.n. (holo. E).

1822. *Cinnamomum porrectum* (Roxb.) Kosterm. in Journ. Sci. Res. Indon. 1: 126 (1952) & in Reinwardtia 8: 60 (1970).

Laurus porrecta Roxb., Hort. Beng. 30 (1814).

L. parthenoxylon Jack in Mal. Misc. 1(5): 28 (1820).

L. glandulifera Wall. in Trans. Med. Phys. Soc. Calcutta 1: 45, 51, t. 1 (1825).

Camphora parthenoxylon (Jack) Nees in Wall., Pl. As. Rar. 2: 72 (1831).

Camphora glandulifera (Wall.) Nees in Wall., Pl. As. Rar. 2: 72 (1831).

Cinnamomum parthenoxylon (Jack) Meissn. in DC., Prodr. 15(1): 26 (1864); Liou, Laurac. Chine & Indoch. 28 (1932); Allen in Journ. Arn. Arb. 17: 325 (1936).

Cinnamomum glanduliferum (Wall.) Meissn. in DC., Prodr. 15(1): 25 (1864); Rehder in Journ. Arn. Arb. 10: 192 (1929); Allen in Journ. Arn. Arb. 20: 46 (1939); Fl. Sichuanica 1: 35 (1981).

Cinnamomum cavaleriei Lévl. in Fedde, Rep. Sp. Nov. 10: 370 (1912) & Fl. Kouy-Tchéou 218 (1914).

Machilus dominii Lévl. in Fedde, Rep. Sp. Nov. 13: 174 (1914) & Cat. Pl. Yunnan 151 (1916).

CHINA. Kweichow, Pin-fa, gr. arb., 23 vi 1903, *Cavalerie* 1084 (holo. *C. cavaleriei*, E). Yunnan, forêts de Ku-long-tchang, 800m, petit arbre, feuilles caduques, fl. blanches, vii 1912, *E. E. Maire* s.n. (holo. *M. dominii*, E).

Kostermans stated (*Reinwardtia* 8: 60, 1970) that he had not been able to find any differences between *Cinnamomum glanduliferum* and *C. parthenoxylon*.

1823. *Lindera communis* Hemsl. in Journ. Linn. Soc. (Bot.) 26: 387 (1891); Liou, Laurac. Chine & Indoch. 130 (1932); Rehder in Journ. Arn. Arb. 18: 275 (1937); Allen in Journ. Arn. Arb. 22: 8 (1941).

Litsaea esquirolii Lévl. in Fedde, Rep. Sp. Nov. 9: 459 (1911) & Fl. Kouy-Tchéou 220 (1914).

Litsaea cavaleriei Lévl. in Fedde, Rep. Sp. Nov. 10: 371 (1912).

Lindera bodinieri Lévl. in loc. cit. & Fl. Kouy-Tchéou 219 (1914).

- Lindera yunnanensis* Lévl. in Fedde, Rep. Sp. Nov. 10: 371 (1912) & Cat. Pl. Yunnan 150 (1916).
Benzoin commune (Hemsl.) Rehder in Journ. Arn. Arb. 1: 144 (1919) & 10: 194 (1929); Allen in Journ. Arn. Arb. 17: 330 (1936).
Nothaphoebe cavaleriei (Lévl.) Yang in Journ. W. China Border Res. Soc. ser. B, 15: 75 (1945).
 CHINA. Kweichow, bois du Tsai men Tse, sous-arbre, 2 vii 1905, *Esquirol* 372 (holo. *L. esquirolii*, E); Pin-fa, 15 vii 1902, *Cavalerie* 65 (holo. *L. cavaleriei* — n.v.); environs de Kouy-yang, mont. du Collège, bois de Kien-lin-chan, grande arbuste, 12–14 iv 1898, *Bodinier* 2179 (syntype *L. bodinieri*, E); Pin-fa, 25 vi 1902, *Cavalerie* 798 (syntype *L. bodinieri*, E). Yunnan, environs de Yunnan-sen, dans la grande ravine, boisée, grande arbuste ou petit arbre, dioïque, plante mâle, 21 iii 1897, *Bodinier* 105 (lecto. *L. yunnanensis*, E).

1824. *Lindera megaphylla* Hemsl. f. *trichoclada* (Rehder) Cheng in Contr. Biol. Lab. Sci. Soc. China (Bot. Ser.) 9: 193 (1934).

- Litsea touyunensis* Lévl. in Fedde, Rep. Sp. Nov. 11: 63 (1912) & Fl. Kouy-Tchéou 220 (1914); Liou, Laurac. Chine & Indoch. 124 (1932), pro syn. sub *L. megaphylla* Hemsl.
Benzoin touyunense (Lévl.) Rehder in Journ. Arn. Arb. 10: 194 (1929), p.p. excl. syn. nec non basionym, in ibid. 11: 158 (1930) & 17: 331 (1936); Nakai in Journ. Jap. Bot. 16: 127 (1940), p.p.
B. touyunense (Lévl.) Rehder f. *trichocladum* Rehder in Journ. Arn. Arb. 11: 159 (1930).
Lindera megaphylla Hemsl. f. *touyunensis* (Lévl.) Rehder in Journ. Arn. Arb. 18: 275 (1937).

CHINA. Kweichow, Tou yun, 10 xi, *Cavalerie* 1 (holo. *L. touyunensis*, E).

Litsea chaffanjoni Lévl. = *Symplocos stellaris* Brand (Symplocaceae).

1825. *Litsea coreana* Lévl. in Fedde, Rep. Sp. Nov. 10: 370 (1912); Allen in Journ. Arn. Arb. 17: 327 (1936), p.p. pro syn. sub *Machilus thunbergii* Sieb. & Zucc.; Nakai in Fl. Sylv. Kor. 22: 38, (1939), p.p. pro syn. sub *Machilus thunbergii*.

- L. zuccarinii* Kosterm. in Reinwardtia 8: 117 (1970).
L. orientalis Chang in Fl. Taiwan 2: 446 (1976).
 KOREA. Quelpaert in sylvis Sanpangsang, x 1908, *Taquet* 1355 (lecto. *L. coreana*, E); in sylvis Taitpjeng, x 1909, *Taquet* 3171 (syntype *L. coreana*, E); in sylvis Yangkeuni, 10 ix 1910, *Taquet* 4401 (syntype *L. coreana*, E).

The other syntype of *L. coreana*, *Taquet* 1356, is *Persea thunbergii* (q.v.) and the description of the fruit refers to this specimen.

1826. *Litsea cubeba* (Lour.) Pers., Syn. 2: 4 (1807); Rehder in Journ. Arn. Arb. 10: 194 (1929) & in ibid. 11: 157 (1930).

- Laurus cubeba* Lour., Fl. Cochinch. 1: 252 (1790).
Lindera dielsii Lévl. in Fedde, Rep. Sp. Nov. 10: 370 (1912).
Litsea dielsii (Lévl.) Lévl. Fl. Kouy-Tchéou 220 (1914).

CHINA. Kweichow, Pin-fa, mont., fl. blan. jau., odor., 22 iii 1903,

Cavalerie 932 (syntype *L. dielsii*, E); Pin-fa, 27 ii 1902, *Cavalerie* 1299 (syntype *L. dielsii* — n.v.).

1827. *Litsea dunniana* Lévl. in Fedde, Rep. Sp. Nov. 9: 460 (1911) & Fl. Kouy-Tchéou 220 (1914); Allen in Journ. Arn. Arb. 17: 329 (1936) & in Ann. Missouri Bot. Gard. 25: 391 (1938).

Neolitsea sp., Rehder in Journ. Arn. Arb. 10: 193 (1929).

CHINA. Kweichow, forêt Gam-go, arbre, 15 xii 1905, *Esquirol* 565 (holo. E).

We agree with Allen that *L. dunniana* closely resembles *L. garrettii* Gamble var. *longistaminata* Liou, now *L. longistaminata* (Liou) Kosterm. The only difference seems to be the shape of the leaves. Kostermans provisionally referred the Kew isotype of *L. dunniana* to *Actinodaphne* sp. nov.

1828. *Litsea kobuskiana* Allen in Journ. Arn. Arb. 18: 290 (1937) & in Ann. Missouri Bot. Gard. 25: 389 (1938).

Eurya esquirolii Lévl. Fl. Kouy-Tchéou 414 (1915), in clavi.

Litsea esquirolii (Lévl.) Allen in Journ. Arn. Arb. 17: 329 (1936) — non *L. esquirolii* Lévl. (1911).

Neolitsea sp., Rehder in Journ. Arn. Arb. 10: 193 (1929).

CHINA. Kweichow, Gan-chouen, 1912, *Cavalerie* 3893 (holo. *E. esquirolii*, E).

Allen treated *Eurya esquirolii* as a nomen nudum, but it was validated in Léveillé's key.

Litsea mairei Lévl. = *Myrica nana* Cheval. (Myricaceae).

Litsea myricopsis Lévl. = *Myrica esculenta* [Buch.-Ham. ex] D. Don. (Myricaceae).

1829. *Litsea sericea* (Nees) Hook. f., Fl. Br. Ind. 5: 156 (1886).

Tetranthera sericea Nees in Wall., Pl. Asiat. Rar. 2: 67 (1831).

Lindera esquirolii Lévl. in Fedde, Rep. Sp. Nov. 9: 327 (1911); Fl. Kouy-Tchéou 219 (1914), pro syn. sub *Lindera praecox* Bl.

Litsea sp., Allen in Journ. Arn. Arb. 17: 330 (1936) & in Ann. Missouri Bot. Gard. 25: 369 (1938).

CHINA. Kweichow, *Esquirol* 738 (holo. *Lindera esquirolii*, E).

Allen first annotated the holotype of *L. esquirolii* in March 1936 as *Litsea* aff. *sericea* Hook. f. In October 1936 under *Litsea* sp. she referred to the type (and other specimens) as doubtless representing a new species and in 1938 she referred *Esquirol* 738 as possibly being synonymous with *Litsea forrestii* Diels, although she had not seen the type of this species.

We have examined the types or authentic material of *L. esquirolii*, *L. forrestii*, *L. sericea*, *L. pungens* and *L. ichangensis*, all species with similar flowers. Of this group, the specimen of *L. esquirolii*, which is totally without leaves, looks closer to *L. sericea* than to *L. forrestii* which has longer peduncles.

1830. *Neolitsea undulatifolia* (Lévl.) Allen in Journ. Arn. Arb. 17: 328 (1936) & in Ann. Missouri Bot. Gard. 25: 417 (1938).

Litsea undulatifolia Lévl., Fl. Kouy-Tchéou 220 (1914).

Neolitsea sp., Rehder in Journ. Arn. Arb. 10: 193 (1929).

CHINA. Kweichow, Tou-chan, fleurs blanches odoriférantes, arbuste, 14 iii 1900, *Cavalerie* s.n. (lecto, E).

Léveillé cited *Cavalerie* 1954 from Pin-fa as a syntype of *L. undulatifolia* and also cited it under *Lindera* sp. (*Fl. Kouy-Tchéou* 219). This specimen is completely vegetative and impossible to identify accurately although it is probably a *Litsea* or *Neolitsea* — its leaf venation is different from that of *Cavalerie* s.n.

1831. *Nothaphoebe cavaleriei* (Lévl.) Yang in Journ. West China Bord. Res. Soc. 15(B): 75 (1945).

Lindera cavaleriei Lévl. in Fedde, Rep. Sp. Nov. 10: 371 (1912) & Fl. Kouy-Tchéou 219 (1914).

Machilus mairei Lévl. in Fedde, Rep. Sp. Nov. 13: 174 (Feb. 1914) & Cat. Pl. Yunnan 151 (1916).

M. dunnianus Lévl. in Fedde, Rep. Sp. Nov. 13: 174 (Feb. 1914) & Cat. Pl. Yunnan 151 (1916).

Alseodaphne omeiensis Gamble in Sarg., Pl. Wils. 2: 70 (March 1914).

Nothaphoebe omeiensis (Gamble) Chun in Contrib. Biol. Lab. Sci. Soc.

China 1(5): 33 (1925) & in Journ. Arn. Arb. 8: 21 (1927); Rehder in

Journ. Arn. Arb. 10: 192 (1929); Liou, Laurac. Chine & Indoch. 79

(1932); Allen in Journ. Arn. Arb. 17: 327 (1936).

Persea cavaleriei (Lévl.) Kosterm. in Reinwardtia 6: 191 (1962).

Phoebe dunniana (Lévl.) Kosterm. in ibid. 9: 112 (1974).

CHINA. Kweichow, Tsin-gai (Kao-po), petit arbre, bord, ruis., 5 viii 1903, *Cavalerie* 1222 (holo. *L. cavaleriei*, E). Yunnan, Long-Ky, forêts, 700m, arbre, feuilles caduques, fl. blanc jaunâtre, v 1912, *E. E. Maire* s.n. (holo. *M. mairei*, E); collines boisées de Long-Ky, petit arbre, feuilles persistantes, fl. blanches, vi 1912, *E. E. Maire* s.n. (holo. *M. dunnianus*, E).

In 1972 Kostermans annotated all the Edinburgh material under the above names as '*Phoebe cavaleriei* (Lévl.) Kosterm.' but as far as we have been able to ascertain this combination has not been published. Rather than validate this combination and add to the synonymy we prefer to leave this taxon under *Nothaphoebe*. In our limited examination of the material in question we are by no means certain of the clear distinction between *Phoebe* and *Nothaphoebe* apart from the perianth parts. The perianth lobes are reputed to be equal or subequal in *Phoebe* but unequal, i.e. the outer smaller than the inner, in *Nothaphoebe*. On this basis we find that in the scanty flowering material of *Lindera cavaleriei*, the perianth parts are almost equal, thus approaching *Phoebe*. On the other hand, in the abundant flowering material available of *Machilus mairei* and *M. dunnianus* the sepals are unequal, approaching *Nothaphoebe* s.s. The leaves of all the specimens are similarly oblanceolate, with short white appressed hairs below, and we cannot distinguish between them.

1832. *Persea thunbergii* (Sieb. & Zucc.) Kosterm. in Commun. For. Res. Inst. Indon. 57: 35 (1957) & in Reinwardtia 6: 194 (1962).

Machilus thunbergii Sieb. & Zucc. in Abh. Bayer. Akad. Wiss. Münch. Math. Phys.-Kl. 4(3): 202 (1846); Allen in Journ. Arn. Arb. 17: 327 (1936), p.p. quoad *Taquet* 1356.

Litsea coreana Lévl. in Fedde, Rep. Sp. Nov. 10: 370 (1912), p.p. quoad *Taquet* 1356.

KOREA. Quelpaert in pago Sykeni prope mare, vii 1908, *Taquet* 1356 (syntype *L. coreana*, E).

1833. *Sassafras tzumu* (Hemsl.) Hemsl. in Kew Bull. 1907: 55 (1907); Allen in Journ. Arn. Arb. 17: 328 (1936).

Lindera tzumu Hemsl. in Journ. Linn. Soc. (Bot.) 26: 392 (1891).

L. camphorata Lévl. in Fedde, Rep. Sp. Nov. 9: 459 (1911) & Fl. Kouy-Tchéou 219 (1914).

CHINA. Kweichow, Touan-po, district de Oui-ne, arbre rare, bonne odeur de camphre émanant des feuilles froissées, 13 vii 1905, *Cavalerie* 2484 (holo. *L. camphorata*, E).

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HERNANDIACEAE

Hernandia sinensis Lévl. = *Iodes vitiginea* (Hance) Hemsl. (Olacaceae).

1834. *Illigera rhodantha* Hance var. *dunniana* (Lévl.) Kubitzki in Bot. Jahrb. 89: 168 (1969).

I. dunniana Lévl. in Fedde, Rep. Sp. Nov. 9: 326 (1911).

I. glandulosa Gagnep. in Not. Syst. 3: 364 (1918).

CHINA. Kweichow, ouest de Lo-fou, sous bois, longue liane au fl. jaunâtres ou rougeâtres, xi 1905, *Cavalerie* 2719 (holo. *I. dunniana*, syntype *I. glandulosa* E).

THYMELAEACEAE
(KIT TAN)

Daphne argyi Lévl. = *Myrica rubra* Sieb. & Zucc. (Myricaceae).

Daphne bodinieri Lévl. (1914) = *Alyxia schlechteri* Lévl. (Apocynaceae).

1835. *Daphne esquirolii* Lévl. in Bull. Acad. Géog. Bot. 25: 42 (1915) & Cat. Pl. Yunnan 271 (1917); Rehder in Journ. Arn. Arb. 15: 105 (1934); Hamaya in Acta Hort. Gotob. 26(4): 83 (1963).

D. leuconeura Rehder in Sarg., Pl. Wils. 2: 548 (1916).

D. leuconeura Rehder var. *mairei* Rehder & Lévl. in Sarg., Pl. Wils. 2: 548 (1916) & Lévl., Cat. Pl. Yunnan 271 (1917).

Wikstroemia leuconeura (Rehder) Domke in Notizbl. Bot. Gart. Berlin 11: 363 (1932).

CHINA. Yunnan, monts. derrière Mongkou, 2000m, arbuste, fl. jaunes, iii 1912, *E. E. Maire* s.n. (holo. *D. esquirolii* & *D. leuconeura* var. *mairei*, E).

1836. *Daphne feddei* Lévl. in Fedde, Rep. Sp. Nov. 9: 326 (1911) & Fl. Kouy-Tchéou 416 (1915); Rehder, in Sarg., Pl. Wils. 2: 547 (1916); Hand.-Mazz., Symb. Sin. 7: 588 (1933); Rehder in Journ. Arn. Arb. 15: 105 (1934) & 18: 226 (1937).

D. martini Lévl. in Fedde, Rep. Sp. Nov. 10: 369 (1912), Fl. Kouy-Tchéou 416 (1915) & Cat. Pl. Yunnan 272 (1917); Lecomte, Not. Syst. 3: 216 (1916) pro syn. sub *D. papyracea* quoad *Bodinier* 2076.

CHINA. Kweichow, sine loc., *Cavalerie* 101 (holo. *D. feddei*, E); environs de Kouy-yang, mont. du Collège, ii 1898, *Chaffanjon in herb. Bodinier* 2076 (syntype *D. martini*, E); environs de Gan-pin, aux grandes rocaillies, fleurs vert-jaunâtre, ii 1898, *Martin in herb. Bodinier* 2076 (syntype *D. martini*, E); Yeou Lang, fl. blanches, *Esquirol* 775 (syntype *D. martini*, E).

1837. *Daphne papyracea* [Wall. ex] Steudel emend Smith & Cave in Rec. Bot. Surv. Ind. 6: 54 (1913); Rehder in Sarg., Pl. Wils. 2: 546 (1916); Lévl., Cat. Pl. Yunnan 272 (1917); Rehder in Journ. Arn. Arb. 15: 105 (1934).

D. odora sensu D. Don, Prodr. Pl. Nep. 68 (1825), non Thunb. (1784).

D. papyrifera [Buch.-Ham. ex] D. Don, Prodr. Fl. Nep. 68 (1825); Lévl., Fl. Kouy-Tchéou 417 (1915).

D. papyracea [Wall. ex] Steudel, Nomencl. Bot. 1: 483 (1840), p.p.; Meissn. in Denkschr. Konigl.-Baier. Bot. Ges. Regensb. 3: 282 (1841), p.p.

D. cannabina sensu Hook. f., Fl. Brit. Ind. 5: 193 (1886), p.p., non Wall.

D. mairei Lévl. in Bull. Acad. Géog. Bot. 25: 41 (1915) & Cat. Pl. Yunnan 271 (1917).

D. cavaleriei Lévl., in Bull. Acad. Géog. Bot. 25: 42 (1915) & Cat. Pl. Yunnan 271 (1917).

CHINA. Yunnan, sous bois des mont. à Ta-tchai, 3000m, arbrisseau toujours vert, haut 0.40m, fl. roses, iv 1912, *E. E. Maire* s.n. (holo. *D. mairei*, E); brousse de Lan-ngi-tsin, 2600m, arbuste toujours vert, fl. blanches odorantes, iii 1912, *E. E. Maire* s.n. (holo. *D. cavaleriei*, E).

1838. *Daphne tangutica* Maxim. in Bull. Acad. Sci. St. Pétersb. 27: 531 (1881) & in Mém. Biol. Acad. Sci. St. Pétersb. 11: 309 (1881); Rehder in Journ. Arn. Arb. 9: 97 (1928) & 15: 104 (1934).

D. bodinieri Lévl. in Bull. Acad. Géog. Bot. 25: 42 (1915) & Cat. Pl. Yunnan 271 (1917) — non *D. bodinieri* Lévl. (1914).

D. wilsonii Rehder in Sarg., Pl. Wils. 2: 540 (1916).

CHINA. Yunnan, haut plateau de Ta-hai-tse, arbuste rameux, feuil. vert clair, fl. blanches, v 1912, *E. E. Maire* s.n. (holo. *D. bodinieri* (1915) & *D. wilsonii*, E).

1839. *Diarthron linifolium* Turcz. in Bull. Soc. Nat. Mosc. 5: 204 (1832); Hendrych in Novit. Bot. Horti Bot. Univ. Carol. Prage 1962: 15–16 (1962).

Thesium chaneti Lévl. in Fedde, Rep. Sp. Nov. 9: 446 (1911).

CHINA. Hopei (Tché-Ly), 1904, *Chanet* 588 (holo. *T. chaneti*, E).

1840. *Stellera chamaejasme* L., Sp. Pl. 559 (1753); Rehder in Journ. Arn. Arb. 15: 106 (1934), p.p.

ssp. *chamaejasme*.

S. bodinieri Lévl. in Fedde, Rep. Sp. Nov. 10: 369 (1912), p.p., Fl. Kouy-Tchéou 417 (1915) & Cat. Pl. Yunnan 272 (1917).

Wikstroemia chamaejasme (L.) Domke in Notizbl. Bot. Gart. Berlin 11: 362 (1932).

CHINA. Kweichow, dans la mont. entre Hin-y-hien et Hin-y-fou, belles fl. jaunes, 12 iv 1897, *Bodinier* s.n. (syntype *S. bodinieri*, E). Yunnan, environs de Yunnan-sen, haut des montagnes, belles fleurs jaunes, 19 iii 1897, *Ducloux* s.n. (syntype *S. bodinieri*, E).

1841. *Stellera chamaejasme* L. ssp. *angustifolia* (Diels) Kit Tan, stat. nov.

S. chamaejasme L. f. *angustifolia* Diels in Notes R.B.G. Edinb. 7: 88 (1912).

S. bodinieri Lévl. in Fedde, Rep. Sp. Nov. 10: 369 (1912), p.p.

CHINA. Yunnan, montagnes entre Ma-Kay et Se hong, 9 iv 1897, *Ducloux* s.n. (syntype *S. bodinieri*, E), (mounted on same sheet as the other two syntypes).

Wikstroemia bodinieri (Lévl.) Lévl. = *Alyxia schlechteri* Lévl. (Apocynaceae).

Wikstroemia hemsleyana Lévl. = *Alstonia mairei* Lévl. (Apocynaceae).

1842. *Wikstroemia indica* (L.) C. A. Meyer in Bull. Phys.-Math. Acad. Sci. St. Pétersb. 1: 357 (1843); Rehder in Journ. Arn. Arb. 15: 103 (1934).

Daphne indica L., Sp. Pl. 357 (1753).

W. valbrayi Lévl., Fl. Kouy-Tchéou 417 (1915); Rehder in Sarg., Pl. Wils. 2: 538 (1916); Lévl., Cat. Ill. Pl. Seu-Tchouen t. 63 (1918).

CHINA. Kweichow, Tsin-gay, mont., fl. jaunes, 4 viii 1903, *Cavalerie* 1261 (syntype *W. valbrayi*, E); route Pin-fa-Tin-fan, xi 1904, *Cavalerie* 1865 (syntype *W. valbrayi*, E).

1843. *Wikstroemia salicina* (Lévl.) Lévl. & Blin. in Sarg., Pl. Wils. 2: 535

(1916); Lév., Cat. Pl. Yunnan 272 (1917); Rehder in Journ. Arn. Arb. 15: 104 (1934).

Daphne salicina Lév. in Bull. Acad. Géog. Bot. 25: 42 (1915).

CHINA. Yunnan, pâturages du Ié-ma-tchouan, 3200m, arbuste buissonnant, haut 1.50m, fl. jaunes, vii 1912, *E. E. Maire* s.n. (holo. E).

The date of collecting is listed as 1912 under *Daphne* but 1913 under *Wikstroemia*.

1844. *Wikstroemia sandwicensis* Meisn. in DC., Prodr. 14: 545 (1857); C. Skottsberg in Acta Reg. Soc. Sci. Litt. Gotob. (Bot.) 1: 113, f. 33 a-k (1972); Lauener in Notes R.B.G. Edinb. 38: 497 (1980); St John in Phytologia 45: 291 (1980).

W. fauriei Lév. in Fedde, Rep. Sp. Nov. 10: 156 (1911).

W. multispicata [Lév. ex] Rock in Fedde, Rep. Sp. Nov. 13: 355 (1914), nom. nud.

HAWAIIAN (SANDWICH) ISLANDS. Hawaii, Hilo, v 1909, *Faurie* 518 (iso. *W. fauriei*, BM); Hilo, v 1909, *Faurie* 524 (*W. multispicata*-n.v.).

Léveillé did not describe *W. multispicata* and Rock presumably took up a manuscript name. In his protologue Léveillé cited Hilo under the island of Maui but this was a clerical error.

1845. *Wikstroemia vaccinium* (Lév.) Rehder in Journ. Arn. Arb. 15: 103 (1934).

Lonicera vaccinium Lév., Fl. Kouy-Tchéou 64 (1914).

CHINA. Kweichow, Pin-fa, très hautes montagnes, fl. roses, v. 1902, *Cavalerie* 26 (holo. E).

ELAEAGNACEAE

(D. McKEAN)

1846. *Elaeagnus argyi* Lév. in Fedde, Rep. Sp. Nov. 12: 101 (1913) and in Mem. Real Acad. Cienc. Artes Barcelona ser. 3, 12: 550 (1916); Rehder in Journ. Arn. Arb. 18: 226 (1937), pro syn. sub *E. umbellata* Thunb.; Icon. Cormophyt. Sin. 2: 965 (1972).

CHINA. Kiangsu, Zuo-Se et Pou-Si, montagnes, comestible, à feuilles argentées tachetées de points jaunes sur les 2 faces, hétérophylle (vulgo noms 'tsia-mi et 'ia-tsao-tse), *d'Argy* s.n. (holo. *E. argyi*, E).

E. argyi is closely related to *E. umbellata* var. *coreana* (Lév.) Lév., both taxa having stellate indumentum, especially on the young leaves. However, *E. argyi* has ferruginous scales on the flowers whereas those of var. *coreana* are silvery.

Elaeagnus chetaiensis Lév. in China Rev. Ann. 89 (1917-18), nom. nud.

CHINA. Anhwei, Che t'ai, 23 v 1916, 'commune dans les bois d'une localité nommé Ts'i t'ou, (le 7 ème canton du Che tai hien), n'est peut-être pas rare ailleurs: son fruit est remarquable par sa forme fuselée très aigue: ce n'est pas le (*E.*) *chekiangensis* Matsuda de Ning po'.

The above name is included in the list of plants collected in the province of Ngan-Hoei (Anhwei) by P. Courtois, but there is no specimen in the Lévillé herbarium. Possibly it is at Paris.

1847. *Elaeagnus umbellata* Thunb. var. *coreana* (Lévl.) Lévl., Cat. Pl. Yunnan 83 (1916); Hara, Enum. Sperm. Jap. 3: 242 (1954); Ohwi, Fl. Jap. (Engl. ed.) 647 (1965).

E. coreana Lévl. in Fedde, Rep. Sp. Nov. 12: 101 (1913)

E. umbellata auct. non Thunb.; Nakai in Bot. Mag. Tokyo 30: 76 (1916);

Rehder in Journ. Arn. Arb. 18: 226 (1937), p.p. excl. syn. *E. argyi*.

KOREA. In montibus Fusan, 25 v 1906, *Faurie* 986 (lectotype *E. coreana*, E).

As noted by Rehder (loc. cit.) Lévillé did not cite any *Faurie* or *Taquet* numbers under *E. coreana* but several specimens were in a folder labelled as such. Accordingly, *Faurie* 986 has been chosen as the lectotype.

LORANTHACEAE

1848. *Taxillus cavaleriei* (Lévl.) Danser in Blumea 2: 53 (1936) descr. emend.

Loranthus sp., Lévl., Fl. Kouy-Tchéou 263 (1914), p.p.

Loranthus cavaleriei Lévl., Cat. Pl. Yunnan 172 (1916), in nota.

CHINA. Kweichow, nord de Lo-fou, Touan-chu, xi 1905, *Cavalerie* 2660 (holo. E).

Under *Loranthus* sp. in *Flore du Kouy-Tchéou*, Lévillé cited six collections and these have been identified as follows: *Cavalerie* 2660 (see above), *Martin & Bodinier* 1796 & *Esquirol* 175 = *Taxillus sutchuenensis* (Lecomte) Danser, *Esquirol* 52 & *Esquirol* 485 = *Tolypanthus esquirolii* (see below), and *Esquirol* 758 = *Taxillus vestitus* (Wall.) Danser.

1849. *Tolypanthus esquirolii* (Lévl.) Lauener, comb. nov.

Loranthus sp., Lévl., Fl. Kouy-Tchéou 263 (1914), p.p.

Loranthus esquirolii Lévl. in China Rev. Ann. 22 (1916).

L. maclurei Merrill in Philipp. Journ. Sci. 21: 494 (1922).

Tolypanthus maclurei (Merr.) Danser in Bull. Jard. Bot. Buitenzorg ser. 3, 10: 355 (1929); Rehder in Journ. Arn. Arb. 17: 82 (1936).

CHINA. Kweichow, Pin-fa, Heou-tcheng, liane parasite sur le bibassier, 10 v 1904, *Esquirol* 52 (holo. *L. esquirolii*, E).

Danser identified *Esquirol* 52 as *Tolypanthus maclurei* in 1935, six years after making the combination of *T. maclurei*. Rehder realized that *Loranthus esquirolii* carried the earlier epithet but considered it not to be validly published as only a few copies of Lévillé's *China Revue Annuelle* were distributed. However, under Article 29 of the Code of Nomenclature I have always considered new species in this publication to be validly published, e.g. *Crotalaria duboisii* Lévl. and *Lathyrus esquirolii* Lévl.

Lévillé's description of *Loranthus esquirolii*, i.e. 'Folia ligustriformia, flores magni' is very inadequate, but is sufficient to validate it, and a new combination must regrettably be made.

SANTALACEAE

Thesium chanetii Lévl. = *Diarthron linifolium* Turcz. (Thymelaeaceae).

BALANOPHORACEAE

1850. *Balanophora abbreviata* Bl., En. Pl. Jav. 1: 87 (1827); B. Hansen in Dansk Bot. Arkiv 28(1): 134 (1972).

B. cavaleriei Lévl. in Fedde, Rep. Sp. Nov. 2: 115 (1906); Lévl., Fl. Kouy-Tchéou 44 (1914), p.p. pro syn. sub *B. involucrata* Hook. f.
CHINA. Kweichow, Tien-sen Kiao, pentes sur la rivière, xi 1904, *Cavalerie* 1860 (holo. *B. cavaleriei*, E).

Esquirol 805, cited in *Flore du Kouy-Tchéou* under *B. involucrata* belongs to *B. harlandii* Hook. f.

1851. *Balanophora harlandii* Hook. f. in Trans. Linn. Soc. London 22: 426, t. 75 (1859); B. Hansen in Dansk Bot. Arkiv 28(1): 157 (1972).

B. esquirolii Lévl. in Fedde, Rep. Sp. Nov. 2: 115 (1906); Lévl., Fl. Kouy-Tchéou 45 (1914), pro syn. sub *B. polyandra* Griff.
CHINA. Kweichow, à La long, sur les racines d'un grand figuier, x 1904, *Esquirol* 238 (holo. *B. esquirolii*, E).

REFERENCE FOR BALANOPHORACEAE

HANSEN, B. (1972). The genus *Balanophora*, a taxonomic monograph. *Dansk. Bot. Arkiv*. 28(1): 1-188.